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Titolo	Fusion Methodologies in Crisis Management : Higher Level Fusion and Decision Making // edited by Galina Rogova, Peter Scott
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ISBN	3-319-22527-8
Edizione	[1st ed. 2016.]
Descrizione fisica	1 online resource (544 p.)
Disciplina	620
Soggetti	Quality control Reliability Industrial safety Natural disasters Computers Public administration Electrical engineering Quality Control, Reliability, Safety and Risk Natural Hazards Information Systems and Communication Service Public Administration Communications Engineering, Networks
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Part I Information fusion, decision making, and crisis management -- Part II Methods of crisis domain representation -- Part III Uncertainty representation -- Part IV Information quality and fusion processes -- Part V Computational approaches to reasoning about situations and threat -- Part VI Decision making for situation management -- Part VII Specific crisis scenarios in the domains of homeland security, epidemics, and natural disasters with application of the methods and processes discussed in the book -- Part VIII Challenges and future research directions for designing and integrating higher level fusion and decision making processes for crisis management.

This book emphasizes a contemporary view on the role of higher level fusion in designing crisis management systems. It provides the formal foundations, architecture, and implementation strategies required for building dynamic current and future situational pictures. It goes on to discuss the state-of-the-art computational approaches to designing such processes and their inherent challenges. This book integrates recent advances in decision theory with those in fusion methodology to define an end-to-end framework for decision support in crisis management. The text discusses modern fusion and decision support methods for dealing with heterogeneous and often unreliable, low fidelity, contradictory, and redundant data and information, as well as rare, unknown, unconventional or even unimaginable critical situations. The book also examines the role of context in situation management, cognitive aspects of decision making and situation management, approaches to domain representation, visualization, as well as the role and exploitation of the social media. The editors include examples and case studies from the field of disaster management. · Discusses decision making in extreme and rare situations · Presents method of representing and controlling information quality · Examines context exploitation and discovery for situation management . Provides opportunities and complexities of integrating social media in crisis management.
